



EXPRESS MAIL NO. EL897874831US *11/0*

1

SEQUENCE LISTING

<110> Goshorn, Stephen C.  
Graves, Scott Stoll  
Schultz, Joanne Elaine  
Lin, Yakang  
Sanderson, James A.  
Reno, Jonh M.

<120> STREPTAVIDIN EXPRESSED GENE FUSIONS AND  
METHODS OF USE THEREOF

<130> 690022.547

<140> US 09/589,870

<141> 2000-06-05

<160> 47

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cgaggcgagg atcaacaccc agtggctgct gacctccggc accaccgagg ccaacgcctg 480  
gaagtccacg ctggcggcc acgacacatt caccaaggtg aagccgtccg ccgcctccat 540  
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<213> Streptomyces avidinii

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35 40 45  
Leu Gly Ser Thr Phe Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr

*RECEIVED*  
TECH CENTER 1600/2900  
DEC 13 2001

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Ala Thr Thr Trp Ser Gly Gln	Tyr Val Gly Gly	Ala Glu Ala Arg Ile	
115	120	125	
Asn Thr Gln Trp Leu Leu	Thr Ser Gly Thr	Thr Glu Ala Asn Ala Trp	
130	135	140	
Lys Ser Thr Leu Val Gly His Asp Thr Phe	Thr Lys Val Lys Pro	Ser	
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<210> 4  
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&lt;212&gt; PRT

&lt;213&gt; Streptomyces avidinii

&lt;400&gt; 4

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Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser
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Gln	Gly	Ile	Arg	Gly	Asn	Leu	Asp	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys
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Gly	Pro	Lys	Leu	Leu	Ile	Tyr	Ser	Thr	Ser	Asn	Leu	Asn	Ser	Gly	Val
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Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Asp	Tyr	Thr	Leu	Thr		
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Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Leu	Gln
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Arg	Asn	Ala	Tyr	Pro	Tyr	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile
				115				120				125			
Lys	Ile	Ser	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	
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Gly	Ser	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys
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Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Phe	Asn	Ile
				165				170				175			
Lys	Asp	Asp	Thr	Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly
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Gln	Trp	Met	Gly	Arg	Ile	Asp	Pro	Ala	Asn	Gly	Asn	Thr	Lys	Ser	Asp
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Thr	Ala	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Asp	Asp	Thr	Ala	Val
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Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Gly	Ser	Gly	Ser	Ala
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Asp	Pro	Ser	Lys	Asp	Ser	Lys	Ala	Gln	Val	Ser	Ala	Ala	Glu	Ala	Gly
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Ala	Thr	Asp	Gly	Ser	Gly	Thr	Ala	Leu	Gly	Trp	Thr	Val	Ala	Trp	Lys
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Asn	Asn	Tyr	Arg	Asn	Ala	His	Ser	Ala	Thr	Thr	Trp	Ser	Gly	Gln	Tyr
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Gly	Thr	Thr	Glu	Ala	Asn	Ala	Trp	Lys	Ser	Thr	Leu	Val	Gly	His	Asp
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Thr	Phe	Thr	Lys	Val	Lys	Pro	Ser	Ala	Ala	Ser	Ile	Asp	Ala	Ala	Lys
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<212> DNA  
<213> Streptomyces avidinii

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aaatcctca	cc	gcac	cat	cgct	cc	ccat	660
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gcc	cggt	ctcg	ggcc	ggcc	cc	tcga	840
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ggcaac	ccat	ccat	ccat	ccat	cc	ccat	960
ggc	ccat	ccat	ccat	ccat	cc	ccat	1020
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<213> Streptomyces avidinii

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Met His Trp Val Lys Gln Thr Pro Gly Gln Gly Leu Glu Trp Ile Gly		160
165	170	175
Ala Ile Tyr Pro Gly Asn Gly Asp Thr Ser Tyr Asn Gln Lys Phe Lys		
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Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr Met		
195	200	205
Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala		
210	215	220
Arg Ala Gln Leu Arg Pro Asn Tyr Trp Tyr Phe Asp Val Trp Gly Ala		
225	230	235
Gly Thr Thr Val Thr Val Ser Ser Gly Ser Gly Ser Ala Asp Pro Ser		240
245	250	255
Lys Asp Ser Lys Ala Gln Val Ser Ala Ala Glu Ala Gly Ile Thr Gly		
260	265	270
Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe Ile Val Thr Ala Gly Ala		
275	280	285
Asp Gly Ala Leu Thr Gly Thr Tyr Glu Ser Ala Val Gly Asn Ala Glu		
290	295	300
Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp Ser Ala Pro Ala Thr Asp		
305	310	315
Gly Ser Gly Thr Ala Leu Gly Trp Thr Val Ala Trp Lys Asn Asn Tyr		320
325	330	335
Arg Asn Ala His Ser Ala Thr Thr Trp Ser Gly Gln Tyr Val Gly Gly		
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Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu Leu Thr Ser Gly Thr Thr		
355	360	365
Glu Ala Asn Ala Trp Lys Ser Thr Leu Val Gly His Asp Thr Phe Thr		
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Lys Val Lys Pro Ser Ala Ala Ser Ile Asp Ala Ala Lys Lys Ala Gly		
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<212> DNA

<213> Streptomyces avidinii

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<212> PRT  
<213> Streptomyces avidinii

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50 55 60	
Lys Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr	
65 70 75 80	
Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr	
85 90 95	
Tyr Cys Ala Arg Ala Gln Leu Arg Pro Asn Tyr Trp Tyr Phe Asp Val	
100 105 110	
Trp Gly Ala Gly Thr Thr Val Thr Val Ser Lys Ile Ser Gly Gly Gly	
115 120 125	
Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly	
130 135 140	
Ser Gly Gly Gly Ser Ser Asp Ile Val Leu Ser Gln Ser Pro Ala	
145 150 155 160	
Ile Leu Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala	
165 170 175	
Ser Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Ser	
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195 200 205	
Pro Ala Arg Phe Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr	
210 215 220	
Ile Ser Arg Val Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln	
225 230 235 240	
Trp Ile Ser Asn Pro Pro Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu	
245 250 255	
Lys Ser Ser Gly Ser Gly Ser Ala Asp Pro Ser Lys Asp Ser Lys Ala	
260 265 270	
Gln Val Ser Ala Ala Glu Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln	

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Thr	Gly	Arg	Tyr	Asp	Ser	Ala	Pro	Ala	Thr	Asp	Gly	Ser	Gly	Thr	Ala
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Lys	Ser	Thr	Leu	Val	Gly	His	Asp	Thr	Phe	Thr	Lys	Val	Lys	Pro	Ser
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Ala	Ala	Ser	Ile	Asp	Ala	Ala	Lys	Lys	Ala	Gly	Val	Asn	Asn	Gly	Asn
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<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> pKOD linker

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Gly Ser

<210> 10

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker used to create a scFvSA version of  
anti-CD20mAb, B9E9 in the VLVH orientation

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<210> 11

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker used to create a version of B9E9 scFvSA in

the VHVL orientation

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 Gly Gly Gly Ser Gly Gly Gly Ser  
 20 25

<210> 12  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Oligonucleotide primer

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<210> 13  
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<400> 14  
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<210> 15  
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<212> DNA  
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<210> 19  
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<400> 19 gagccagagc tcacggtgac cgtggtccct gcgcccc 38

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<210> 41

<211> 768

<212> DNA

<213> *Streptomyces avidinii*

<400> 41

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<210> 42

<211> 765

<212> DNA

<213> *Streptomyces avidinii*

<400> 42

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<210> 43

<211> 741

<212> DNA

<213> *Streptomyces avidinii*

<400> 43

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<210> 44

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<212> DNA

<213> Streptomyces avidinii

<400> 44

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<212> DNA

<213> Streptomyces avidinii

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 <213> Streptomyces avidinii

<400> 46

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